

Appl. No. 10/678,985
Amtd. Dated June. 30, 2004
Reply to Office Action of March. 31, 2004

REMARKS

Claim Rejections under 35 U.S.C. 102(b)

Claims 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kozel et al..

In response to this, applicant has carefully compared the subject matters claimed in claim 1 of the present invention with Kozel et al.. Applicant believes that claim 1 is patentably distinguished from Kozel et al. and should be allowable. The differences between claim 1 and Kozel et al. that render claim 1 allowable are described below.

An electrical connector defined in claim 1 comprise a housing having a top surface, a bottom surface mounted on a substrate, passageways between the top and bottom surface, contacts in said passageways. Each contact comprises a contact portion at one end thereof and being received in a corresponding passageway, a tail portion at another end thereof. The tail portion is located under the bottom surface of the housing and extends parallel to the bottom surface such that the tail portions are surface mountable onto the substrate. **The housing further provides at least two different geometries on the top surface thereof in accordance with the passageways such that there is at least one pole that may be inserted into one of the passageways having one geometry but may not be inserted into another one of the passageways having the other geometry.** Upon the two different geometries, the electrical connector can mate with a complementary connector in only one orientation, thus that avoids unwanted effect caused by mismating.

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The electrical connector disclosed in Kozel et al comprising an insulative having several passages extending through a top surface and a bottom surface of the housing and a plurality of contacts secured to the housing. Each contact has a contact body secured in the housing and a solder tail extending perpendicular from the contact body and is used for forming an electrical connection with a printed circuit board or the like. As clearly shown in FIG. 1 of Kozel et al, plural openings having a same geometry are located on ends of corresponding passages, therefore, the electrical connector may be inadvertently mated with a complementary connector in a reverse orientation.

Therefore, claim 1 is believed to be patentable over Kozel et al. Dependent claims 2 and claim 3 are also believed to be patentable since they depend, directly or indirectly, from claim 1.

Claim Rejections under 35 U.S.C. 103(a)

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peterson in view of Kozel et al and Kaufman et al.

An electrical connector assembly disclosed in claim 9 comprises a first insulative housing, a plurality of passages defined in the first housing, a plurality of first contacts received in the corresponding passageways, a pair of mounting pads disposed on a bottom face of the first housing so as to mount said first housing to a printed circuit board, a second insulative housing defining a plurality of poles, a plurality of second contacts respectively disposed in the corresponding poles, a plurality of wires connected to tail sections of the second contacts, and at least one deflectable latch formed in the second housing to latchably engage a corresponding

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locking block on the first housing. Each of the first contacts defines a surface mounting tail.

Peterson neither addresses this problem nor suggests this solution. Peterson only discloses a first housing with passageways having first contacts therein, second housing having poles with contacts therein, and a deflectable latch for holding the first housing and the second housing in mating condition. Referring to FIGS. 4-8 of Peterson, each of the first and the second contacts has a mating end and an opposite terminating end. Further, the terminating end is defined by two pairs of crimp arms for terminating to an electrical wire or cable. That is to say, in actual application, both of the first contacts and the second contacts are terminated with the wires or cables (column 6, lines 61-63, column 7, lines 11-12) but not a printed circuit board. However, in the present invention, the pair of mounting pads and the tails of the first contacts extend parallel with the bottom surface of the first housing, locate in a single plane below the bottom surface of the first housing, and are surface mountable onto a substrate for assembling the first housing to the substrate in a right angle.

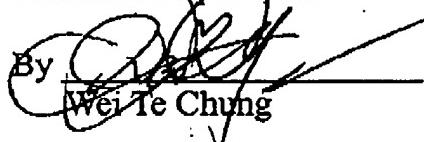
Furthermore, it should be noted that if it simply applies surface mounting tails disclosed in Kozel et al. to the first contacts of the Peterson and the mounting pads disclosed in Kaufman et al. to the first housing, the disclosure of the Peterson is infeasible and is far away from the application of Peterson. *Essentially, because Peterson belongs to the cable connector while Kozel et al. belongs to the board-mount connector, replacing the crimp type contacts of the cable connector of Peterson with the socket type contacts of the board-mount connector of Kozel et al. is NOT obvious because it requires to further modify the housing bottom edge of Peterson to form the corresponding grooves for downward extension of the tails of the substitute contacts of Kozel et al.* Therefore, claim 9 recites the

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of the present invention, is believed to be patentable over Peterson in view of Kozel et al and Kaufman et al. New claims 10-12 are also believed to be patentable since they depend, directly or indirectly, from claim 9.

In view of the above claim amendments and remarks, the subject application is believed to be in a condition for allowance and an action to such effect is earnestly solicited.

Respectfully submitted,
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